CLAIMS

1. A pneumatic tire air pressure monitoring device comprising:
    a. a valve stem mountable on the tire; wherein the valve stem has a pair of electrical contacts, a first valve stem electrical contact in series with a second valve stem electrical contact;
    b. a valve stem cap adapted to fit on the valve stem and having a pair of valve stem cap electrical contacts, a first valve stem cap electrical contact in series with a second valve stem cap electrical contact; wherein upon installation of the valve stem cap, the first valve stem electrical contact makes electrical connection with the first valve stem cap electrical contact and the second valve stem electrical contact makes electrical connection with the second valve stem cap electrical contact, wherein the circuit is interrupted when the first valve stem electrical contact is separated from the first valve stem cap electrical contact and the second valve stem electrical contact is separated from the second valve stem cap electrical contact, wherein the circuit restored when the first valve stem electrical contact is connected to the first valve stem cap electrical contact and the second valve stem electrical contact is connected to the second valve stem cap electrical contact,
    c. a battery in series with the circuit for powering the circuit;
    d. a pressure switch in series with the circuit having a lower resistance when the circuit is completed by the pressure switch and having an infinite resistance when the pressure switch opens the circuit;
    e. a sounder device in series with the circuit and producing sound when the circuit is completed by the pressure switch and remaining inactive when the pressures switch opens the circuit.
2. The device of claim 1 wherein the battery is located within the valve cap and wired in series with the circuit between the first valve stem cap electrical contact and the second valve stem cap electrical contact.
3. The device of claim 1 wherein both the battery and the sounder is located within the valve cap and wired in series with the circuit between the first valve stem cap electrical contact and the second valve stem cap electrical contact.

4. The device of claim 1 wherein the pressure switch is two-stage and produces two stage resistance leading to two levels of warning sound corresponding to preset levels of air pressure.
5. The device of claim 1 wherein the pressure switch is continuously variable and produces continuously variable resistance leading to continuously variable levels of warning sound corresponding to air pressure.
6. The device of claim 1 wherein the pressure switch is in the valve stem.
7. The device of claim 1 wherein the pressure switch is a variable resistance pressure switch.
8. The device of claim 1 wherein the pressure switch is a discrete resistance pressure switch.
9. A pneumatic tire air pressure monitoring device comprising:
    a. a valve stem mountable on the tire; wherein the valve stem has a pair of electrical contacts, a first valve stem electrical contact in series with a second valve stem electrical contact;
    b. a valve stem cap adapted to fit on the valve stem and having a pair of valve stem cap electrical contacts, a first valve stem cap electrical contact in series with a second valve stem cap electrical contact; wherein upon installation of the valve stem cap, the first valve stem electrical contact makes electrical connection with the first valve stem cap electrical contact and the second valve stem electrical contact makes electrical connection with the second valve stem cap electrical contact, wherein the circuit is interrupted when the first valve stem electrical contact is separated from the first valve stem cap electrical contact and the second valve stem electrical contact is separated from the second valve stem cap electrical contact, wherein the circuit restored when the first valve stem electrical contact is connected to the first valve stem cap electrical contact and the second valve stem electrical contact is connected to the second valve stem cap electrical contact,
    c. a battery in series with the circuit for powering the circuit;
    d. a pressure switch in series with the circuit having a lower resistance when the circuit is completed by the pressure switch and having an infinite resistance when the pressure switch opens the circuit;
    e. a lamp in series with the circuit and lighting when the circuit is completed by the pressure switch, and remaining inactive when the pressures switch opens the circuit.

10. The device of claim 9 wherein the battery is located within the valve cap and wired in series with the circuit between the first valve stem cap electrical contact and the second valve stem cap electrical contact.

11. The device of claim 9 wherein both the battery and the lamp are located within the valve cap and wired in series with the circuit between the first valve stem cap electrical contact and the second valve stem cap electrical contact.

12. The device of claim 9 wherein the pressure switch is two-stage and produces two stage resistance leading to two levels of warning lamp brightness corresponding to preset levels of air pressure.

13. The device of claim 9 wherein the pressure switch is continuously variable and produces continuously variable resistance leading to continuously variable levels of lamp brightness corresponding to air pressure.

14. The device of claim 9 wherein the pressure switch is in the valve stem.

15. The device of claim 9 wherein the pressure switch is a variable resistance pressure switch.

16. The device of claim 9 wherein the pressure switch is a discrete resistance pressure switch.

17. A pneumatic tire air pressure monitoring device comprising:

a. a valve stem mountable on the tire; wherein the valve stem has a pair of electrical contacts, a first valve stem electrical contact in series with a second valve stem electrical contact;

b. a valve stem cap adapted to fit on the valve stem and having a pair of valve stem cap electrical contacts, a first valve stem cap electrical contact in series with a second valve stem cap electrical contact; wherein upon installation of the valve stem cap, the first valve stem electrical contact makes electrical connection with the first valve stem cap electrical contact and the second valve stem electrical contact makes electrical connection with the second valve stem cap electrical contact, wherein the circuit is interrupted when the first valve stem electrical contact is separated from the first valve stem cap electrical contact and the second valve stem electrical contact is separated from the second valve stem cap electrical contact, wherein the circuit restored when the first valve stem electrical contact is connected to the first valve stem cap electrical contact and the second valve stem electrical contact is connected to the second valve stem cap electrical contact,

c. a battery in series with the circuit for powering the circuit;

d. a pressure switch in series with the circuit having a lower resistance when the circuit is completed by the pressure switch and having an infinite resistance when the pressure switch opens the circuit;

e. a wireless transmitter receiving tire pressure data in the form of circuit voltage across the pressure switch and transmitting tire pressure data to a wireless receiver.

18. The device of claim 17 wherein the battery is located within the valve cap and wired in series with the circuit between the first valve stem cap electrical contact and the second valve stem cap electrical contact.

19. The device of claim 17 wherein both the battery and the wireless transmitter are located within the valve cap and wired in series with the circuit between the first valve stem cap electrical contact and the second valve stem cap electrical contact.

20. The device of claim 17 wherein the pressure switch is two-stage and produces two stage resistance leading to two levels of wireless transmitter readings corresponding to preset levels of air pressure.

21. The device of claim 17 wherein the pressure switch is continuously variable and produces continuously variable resistance leading to continuously variable levels of wireless transmitter readings corresponding to air pressure.

22. The device of claim 17 wherein the pressure switch is a variable resistance pressure switch.

23. The device of claim 17 wherein the pressure switch is a discrete resistance pressure switch.

24. The device of claim 17 wherein the pressure switch is in the valve stem.